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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/315,988      | 05/21/1999  | HAJIME KAWANO        | 29273/502           | 7205             |

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EXAMINER

FERNANDEZ, KALIMAH

ART UNIT PAPER NUMBER

2881

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/315,988

Applicant(s)

KAWANO ET AL.

Examiner

Kalimah Fernandez

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 stand rejected under 35 U.S.C. 102(b) as being anticipated by JP Document 7-201720 issued to Tamura.

3. Tamura discloses an electron beam lithography system (pg.14, parag. 22).

Tamura discloses the generation of an exposure map (pg.2, summary of the invention; pg. 14, parag. 21).

4. Tamura discloses said exposure map based on coordinates/positional relations (see pg.12, parag. 17-18).

5. Tamura discloses a proximity effect correction means (see pg.13, para. 20).

6. Tamura discloses a judging means for determining any overlap/straddling (pg. 12, para. 18).

7. Tamura discloses the use of a plurality of memories (pg 11-12, para. 15-16).

8. Tamura discloses the addition of area density located in memories, which implies the use of adding circuits(pg.18, para.32-33). Namely, in order to carry out the addition of density memory addition circuits must be employed.

9. As per claim 2, see figs. 6-7; pg. 17, parag. 29.

10. As per claim 3, Tamura discloses adding the area density of an overlap area to the pattern in question (pg. 18, parag.32-33).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 4-10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura and in view of US Pat No 4,692,579 issued to Saitou et al.

13. In regards to claims 4 and 10, Tamura teaches the claimed invention except for NxM memories.

14. However, Saitou teaches a conventional exposure map having N parts in the direction of width and M in the direction of height (col.4, 18-27).

15. It would have been obvious to a person having ordinary skill in the art to incorporate the teaching of Saitou into Tamura, since Saitou teaches improved time and accuracy (col.2, lines 30-40).

16. As per claims 5 and 7, Tamura teaches a bit map generated by a memory means (pg.14, para. 21). Tamura teaches a read-out means for constructing a new pattern density map from the memory data addressed to two different memories (pg 11-12, para. 15-16).

17. As per claim 6, Tamura discloses adding the area density of an overlap area to the pattern in question (pg. 18, parag.32-33).

18. Claims 8-9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura and Saitou as applied to claim 4 above, and further in view of US Pat 3,921,135 issued to Komaru et al.

19. The obvious combination of Tamura and Saitou teaches the claimed invention except for selecting means.

20. However, Komaru teaches a memory system for dividing a larger area using NxM (see col.3, lines 19-45). Komaru, also, teaches the conventional selection of memories for retrieval of stored data (col.4, line 59-col.5, line 4).

21. It would have been obvious to an ordinary skilled artisan to incorporate the teachings of Komaru into Tamura, since Komaru teaches an efficient manner to decrease memory capacity without lowering quality (col.1, lines 30-34).

### ***Response to Arguments***

22. Applicant's arguments filed 11-13-02 have been fully considered but they are not persuasive. Applicant contends that Tamura does not teach the "judging means for judging whether or not each shot straddles a plurality of meshes by using a plurality of memories and adding circuits. However, as stated above Tamura does employ a plurality of memories and adding circuit to carry out his invention (see above rejection).

23. Applicant also argues that the obvious combination of Tamura and Saitou et al fails to teach NxM memories as recited in claims 4-7 and 10. In response, Saitou et al is relied upon to teach the conventional manner of dividing a pattern. It is held that the

teachings of Tamura's memory in light of Saitou's disclosure would obviously read on NxM memories since Saitou's pattern division would obviously be stored in the same manner (i.e. a NxM memory).

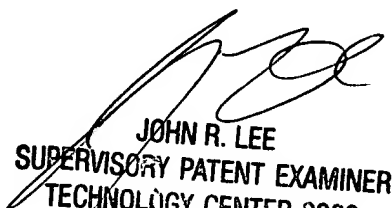
**Conclusion**

.Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalimah Fernandez whose telephone number is 703-305-6310. The examiner can normally be reached on Mon-Thus between 8:30am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Lee can be reached on 703-308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

kf  
January 26, 2003

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800